Derakane® 411-350

Vinyl Ester

Ashland Performance Materials

Message:

DERAKANE 411-350 epoxy vinyl ester resin is based on bisphenol-A epoxy resin and has become the "industry standard" due to its wide range of end-use applications and ability to be used in a wide range of fabrication techniques. The raw materials used in the manufacture of this resin are listed as acceptable in FDA regulation Title 21 CFR 177.2420 for repeated use in contact with food, subject to user's compliance with the prescribed limitations of that regulation.
APPLICATIONS AND USE
DERAKANE 411-350 resin is designed for use in fabricating FRP storage tanks, vessels, ducts and on-site maintenance projects, paticularly in chemical processing and pulp and paper operations.
The resin is designed for ease of fabrication using hand lay-up, spray-up, filament winding, compression molding and resin transfer molding techniques, pultrusion and molded grating applications.

General Information	
Features	Solvent resistance Good corrosion resistance alkali resistance acid resistance Good toughness Compliance of Food Exposure
Uses	Container Water tank
Agency Ratings	FDA 21 CFR 177.2420
Forms	Liquid
Processing Method	Filament power winding pultrusion Hand coating Resin transfer molding Compression molding

Physical	Nominal Value	Unit	Test Method
Density	1.14	g/cm³	ISO 1183
Solution Viscosity	370	mPa·s	
Styrene Content	45	%	
Volume Shrinkage	7.8	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Barcol Hardness	35		ASTM D2583
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
--	3170	MPa	ASTM D638

--	3200	MPa	ISO 527-2
Tensile Strength			
--	82.7	MPa	ASTM D638
--	86.0	MPa	ISO 527-2
Tensile Elongation (Yield)	5.0 - 6.0	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	3380	MPa	ASTM D790
--	3400	MPa	ISO 178
Flexural Strength			
--	152	MPa	ASTM D790
--	150	MPa	ISO 178
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	104	°C	ASTM D648
1.8 MPa, not annealed	105	°C	ISO 75-2/A
Glass Transition Temperature			
--	121	°C	ASTM D3418
--	120	°C	ISO 11357-2
Additional Information	Nominal Value	Unit	

The properties are measured from a postcured clear resin casting.

Recommended distributors for this material

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WECHAT